

<b>INFORMATION DISCLOSURE CITATION</b>  (Use several sheets if necessary) Page 1 of 3			ATTY DOCKET NO: <b>5080.114 (DIV3)</b>		SERIAL NO.	
			APPLICANT: <b>MICHAEL S. BITTAR</b>			
			FILING DATE: <b>Herewith</b>		GROUP:	

U.S. PATENT DOCUMENTS						
Ex. Initial	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	3,014,177	12/19/61	HUNGERFORD, ET AL.	324/8		06/24/57
	3,187,252	06/01/65	HUNGERFORD	324/6		12/18/61
	3,808,520	04/30/74	RUNGE	324/6		04/04/73
	4,302,722	11/24/81	GIANZERO	324/339		06/15/79
	4,536,714	08/20/85	CLARK	324/338		04/16/82
	4,651,101	03/17/87	BARBER, ET AL.	324/339		04/03/85
	4,780,857	10/25/88	LYLE, ET AL.	367/35		12/02/87
	4,808,929	02/28/89	OLDIGS	324/339		05/19/87
	RE 32,913	04/25/89	CLARK	324/338		07/23/87
	4,873,488	10/10/89	BARBER, ET AL.	324/339		11/18/86
	4,940,943	07/10/90	BARTEL, ET AL.	324/338		04/19/88

FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	92402243.7	08/06/92	European Patent Office	G01V 3/12		YES NO
	97118854.5	10/29/97	European Patent Office	G01V 3/30		YES NO

OTHER DOCUMENTS (Include Author, Title, Date, Pertinent Pages, Etc.)	
	Zhu, T. and L. Brown, "Two-dimensional Velocity Inversion and Synthetic Seismogram Computation," GEOPHYSICS, Vol. 52, No. 1, January 1987; p. 37-49.
	Bittar, M. and P. Rodney, "The Effects of Rock Anisotropy on MWD Electromagnetic Wave Resistivity Sensors," THE LOG ANALYST, January-February 1996, p. 20-30.
	Hagiwara, T., "A New Method to Determine Horizontal-Resistivity in Anisotropic Formations without Prior Knowledge of Relative Dip," 37 <sup>th</sup> SPWLA Annual Logging Symposium, New Orleans, LA, 16-19 June 1996, p. 1-5 and three pages of figures.
	Bittar, M., P. Rodney, S. Mack, and R. Bartel, "A True Multiple Depth of Investigation Electromagnetic Wave Resistivity Sensor: Theory, Experiment and Prototype Field Test Results," SPE 22705, 66 <sup>th</sup> Annual Technical Conference and Exhibition of the Society of Petroleum Engineers, Dallas, TX, October 6-9, 1991, p. 1-8 and ten pages of figures.

EXAMINER	DATE CONSIDERED
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**\* Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form next communication to applicant.**

<b>INFORMATION DISCLOSURE CITATION</b>  (Use several sheets if necessary) Page 2 of 3			ATTY DOCKET NO: <b>5080.114 (DIV3)</b>		SERIAL NO.	
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			FILING DATE: Herewith		GROUP:	

U.S. PATENT DOCUMENTS						
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	<b>4,962,490</b>	10/09/90	<b>LYLE, ET AL.</b>	367/35		01/18/90
	<b>4,980,643</b>	12/25/90	<b>GIANZERO, ET AL.</b>	324/339		09/28/89
	<b>5,200,705</b>	04/06/93	<b>CLARK, ET AL.</b>	324/338		10/31/91
	<b>5,230,386</b>	07/27/93	<b>WU, ET AL.</b>	175/45		06/14/91
	<b>5,241,273</b>	08/31/93	<b>LULING</b>	324/338		06/24/91
	<b>5,278,507</b>	01/11/94	<b>BARTEL, ET AL.</b>	324/338		06/14/91
	<b>5,329,448</b>	07/12/94	<b>ROSTHAL</b>	364/422		08/07/91
	<b>5,389,881</b>	02/14/95	<b>BITTAR, ET AL.</b>	324/338		07/22/92
	<b>5,508,616</b>	04/16/96	<b>SATO, ET AL.</b>	324/343		11/20/93
	<b>5,530,358</b>	06/25/96	<b>WISLER, ET AL.</b>	324/338		01/25/94
	<b>5,550,473</b>	08/27/96	<b>KLEIN</b>	324/338		03/29/95
	<b>5,656,930</b>	08/12/97	<b>HAGIWARA</b>	324/339		02/06/95

FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION

OTHER DOCUMENTS (Include Author, Title, Date, Pertinent Pages, Etc.)	
	Mack, S., P. Rodney, and M. Bittar, "MWD tool accurately measures four resistivities," reprint from OIL & GAS JOURNAL, week of May 25, 1992, p. 1-5.
	Bittar, M., P. Rodney, and W. Hendricks, "Invasion Profiling With a Multiple Depth of Investigation Electromagnetic Wave Resistivity Sensor," SPE 28425, 69 <sup>th</sup> Annual Technical Conference and Exhibition of the Society of Petroleum Engineers, New Orleans, LA, 25-28 September 1994, p. 1-12 and eleven pages of figures.
	Luling, M.G., R. Rosthal, and F. Shray, "Processing and Modeling 2-MHz Resistivity Tools in Dipping, Laminated Anisotropic Formations," SPWLA 35 <sup>th</sup> Annual Logging Symposium, 19-22 June 1994, p. 1-25.
EXAMINER _____ DATE CONSIDERED _____	

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